

REMARKS**Response to Claim Rejections Under 35 U.S.C. §102(b)**

The Office has rejected claims 1-4, 12, 14, 16-19, 25 and 27 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,774,650 to Chapman et al. If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more, the applicant is entitled to the grant of the patent. See *In re Oetiker*, 977 F. 2d 1443 (Fed. Cir. 1992). Under 35 U.S.C. § 102, anticipation requires that there is no difference between the claimed invention and reference disclosure, as viewed by a person of ordinary skill in the field of the invention. See *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565. Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. In deciding the issue of anticipation, the trier of fact must identify the elements of the claims, determine their meaning in light of the specification and prosecution history, and identify corresponding elements disclosed in the allegedly anticipating reference. See *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452.

Regarding Applicants' claim 1 (currently amended), claim 1 recites a method for verifying the identity of a new user of a computer system, as contrasted to the Chapman reference which discloses a method for controlling access to a networked computer system. These differences account for the Applicants' claim limitations that are not found in the Chapman reference. It should be noted that the meaning of the term "similarity searching" is based on the use of a similarity search engine disclosed in paragraph 0009 of Applicants' specification as U.S. Patent Application No. 09/401,101, filed on September 22, 1999,

which is incorporated by reference into Applicants' specification. U.S. Patent Application No. 09/401,101 issued as U.S. Patent No. 6,618,727 on September 9, 2003.

Similarity searching according to U.S. Patent No. 6,618,727 is a computer-implemented method for detecting and scoring similarities between documents in a source database and a search criterion such as new user profile data. It uses a hierarchy of parent and child attributes to be searched, linking each child attribute with its parent attribute, which may be likened to a tree type structure with parent and child objects. Source database documents are converted into hierarchical database documents having parent and child objects with data values organized using the hierarchy of parent and child categories to be searched. For each child object, a child object score is calculated that is a quantitative measurement of the similarity between child objects in the hierarchical database documents and the search criteria. A parent object score are computed from its child object scores. Calculating a score comprises determining a number for the score that represents how similar and dissimilar the source value is to the search criteria such as the new user profile data. The calculated score is a quantitative measure of the similarity between the source data and search criteria, and may, for example, take on any value between the numbers zero and one.

The first element of Applicants' claims 1, 16 and 27 (currently amended) recite the limitation, "receiving at least one identity attribute from the new user". The identity attribute in this limitation is not constrained to be user names and passwords for gaining access to a computer system, as cited by the Office in column 1, lines 17-20 of the Chapman reference. Applicants' identity attribute is input by a new user the first time a login is attempted, for determining that the new user is the person identified by the identity

attribute, and may contain any information provided by a user, such as home address, social security number, driver's license number, etc. Applicants' identity attribute is used to determine if the new user has been involved in fraudulent activities in the past, whereas the system access described in the Chapman reference is merely conventional user name and password information used for gaining access to a computer system. The access information listed in the Chapman reference must be entered by all users of a computer system every time a user wishes to gain access to the computer system. The identity attribute profile data of Applicants' disclosure is only required for initial system access by a new user to determine if the new user qualifies for access a computer system, since once a new user qualifies for access to the computer system, the new user no longer needs to re-qualified by inputting identity attribute profile data. Therefore, when the meaning of this limitation of Applicants' claim 1 is interpreted in light of the specification, this limitation is not found in the Chapman reference cited by the Office.

The second and third elements of Applicants' claims 1 and 16 (currently amended), and the fourth element of claim 27 (currently amended) recite the limitation, "similarity searching the at least one new user identity attribute against at least one database of denied user identity attributes" and "receiving a similarity search result", respectively. As described above, U.S. Patent No. 6,618,727, which is incorporated herein by reference, discloses a similarity search engine that may be used for similarity searching by comparing two documents to determine an indicia of similarity that provides a quantitative measure of how alike the two documents are, such as new user identity attributes and denied user identity attributes. This similarity search engine is used to similarity search the identity attributes against denied user identity attributes and provide a similarity search result that

includes indicia of similarity. The denied user identity attributes contain identity attributes of users that have been removed or suspended from the system in the past. If a new user identity attribute has a similarity match to a suspended-user's identity attributes, an investigation is conducted to determine if the new user is trying to gain access to the system by creating a new fictitious account.

The Office cites column 6, line 58-63 of the Chapman reference as disclosing Applicants' second and third limitations of claims 1 and 16 and the fourth limitation of claim 27. This passage describes conventional methods for validating a user account by exact matching of usernames or user numbers provided by a user during a login sequence with data stored in a database file containing unauthorized or temporarily authorized user names or user numbers, authenticating the user by exact comparison of the encrypted true password with that supplied by a user attempting to logon, and establishing exact user credentials stored in a database. This cited passage requires exact matching of usernames and passwords, which may be performed by conventional database management systems. There is no disclosure of similarity searching as disclosed by Applicants in this cited passage, and furthermore, a similarity search would not be applicable or desirable to this application, since persons other than an authenticated user may gain access to the computer system by providing similar usernames and passwords. There is also no disclosure in the Chapman reference of similarity searching identity attribute profile data against denied-users identity attribute profile data. There is no disclosure of either similarity searching or of denied-users identity profile data in the Chapman reference. There is not disclosure in the cited passage in the Chapman reference of receiving a similarity search result.

Furthermore, in order to accomplish this limitation, a similarity search engine like that disclosed in U.S. Patent No. 6,618,727 would be required.

The fourth and fifth element of Applicants' claims 1 and 16 (currently amended) and the fifth and sixth elements of Applicants' claim 27 (currently amended) recite the limitations "determining a positive or negative similarity match between at least one new user identity attribute and the denied user identity attributes based on the similarity search result" and "allowing a new user to access the computer system, where a negative similarity match has been determined", respectively. There is no disclosure in the Chapman reference of determining a positive or negative similarity match between identity attribute profile data and suspended-users identity attribute profile data based on the similarity search result. There is also no disclosure in the Chapman reference of allowing a new user access to the system where a negative similarity match has been determined.

The sixth element of Applicants' claim 1 (currently amended), the eighth element of Applicants' claim 16 (currently amended), and the seventh element of Applicants' claim 27 (currently amended) recite the limitation "denying the new user access to the computer system where a positive similarity match has been determined." There is no disclosure in the Chapman reference of a denying a new user access to the computer system based on a positive similarity match.

The sixth and seventh elements of Applicants' claim 16 (currently amended) recite the limitations "where a positive similarity match has been determined, verifying the positive similarity match via a second review" and "allowing a new user to access the computer system and adding the new user identity to the at least one database of valid user identities, where the positive similarity match is not verified." There is no disclosure in the

Chapman reference of a positive similarity match or of a second review for verification based on the positive similarity match.

The eighth and ninth elements of Applicants' claim 27 (currently amended) recite the limitations "a means for adding the new user identity to the at least one database for storing valid user identities, where a negative similarity match has been determined" and "a means for adding the at least one new user identity attribute to the at least one database of denied user attributes, where a positive similarity match has been determined." There is no disclosure in the Chapman reference of adding a new user identity to a valid user database based on a determined negative similarity match, or of adding a new user identity to a denied user database based on a determined positive similarity score.

Since every element of Applicants claimed invention, arranged as in the independent claims 1, 16 and 27 are not found implicitly, explicitly or inherently in the single reference of Chapman, the Office has failed to substantiate a *prima facie* case for anticipation and Chapman et al does not anticipate Applicants' independent claims 1, 16 and 27. Therefore the rejection of claims 1, 16 and 27 should be withdrawn. Furthermore, claims 2-4, 12, 14, 17-19 and 25 are either directly or indirectly dependent upon independent claims 1 and 16. These dependent claims incorporate all the limitations of the independent claim upon which they depend while providing further unique and non-obvious recitations. Since the rejection of claims 1 and 16 are not supported by the Chapman disclosure, the rejections of these dependent claims 2-4, 12, 14, 17-19 and 25 as anticipated are also not supported by the Chapman reference and should be withdrawn. Applicants request withdrawal of the rejection of claims 1-4, 12, 14, 16-19, 25 and 27 under 35 U.S.C. § 102(b), reconsideration and reexamination of the application.

Regarding dependent claims 4 and 19, there is no disclosure in the Chapman reference of similar searching. Regarding dependent claim 12, there is no disclosure in the Chapman reference of determining whether a positive or negative similarity match exists, of adding a new user identity to a database of valid user identities where a negative similarity match is determined, or of adding a new user identity attributes to a database of denied user identity attributes where a positive similarity match is determined. Regarding dependent claims 14 and 25, there is no disclosure in the Chapman reference of a similarity search result comprising at least one hierarchical document stored in a denied user database. Therefore the rejection of these claims under 35 U.S.C. § 102(b) should also be withdrawn based on a lack of a *prima facie* case for anticipation.

#### **Response to Claim Rejections Under 35 U.S.C. 103(a)**

The Office has also rejected claims 5-11, 13 and 20-24 under 35 U.S.C. § 103(a) as being unpatentable over Chapman et al. (U.S. Patent No. 5,774,650) in view of U.S. Patent No. 6,026,398 to Brown et al, and in view of U.S. Patent No. 6,626,092 to Berke. The Office bears the initial burden of establishing a *prima facie* case of obviousness. *See In re Piasecki*, 223 USPQ785, 788 (Fed. Cir. 1984). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success

must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991), MPEP § 2142 and § 2143.

Regarding Applicants' claims 5-11, 13 and 20-24, claims 5-11 and 13 are either directly or indirectly dependent upon independent claim 1, and claims 20-24 are either directly or indirectly dependent on independent claim 16. These dependent claims incorporate all the limitations of the independent claim upon which they depend while providing further unique and non-obvious recitations. Since it has been shown above that the rejection of claims 1 and 16 are not supported by the Chapman disclosure and are not anticipated, the rejections of these dependent claims 5-11 and 20-23 as obvious are also not supported by the Chapman reference and should be withdrawn.

Considering further Applicants' claims 5 and 20 (currently amended), claims 5 and 20 recite the limitation, "wherein the step of determining a positive or negative similarity match further comprises comparing the similarity search result to a first match tolerance level." As described above, U.S. Patent No. 6,618,727, which is incorporated herein by reference, discloses a similarity search engine that may be used for similarity searching by comparing two documents to determine indicia of similarity that provides a quantitative measure of how alike the two documents are, such as a new user profile data and suspended-users profile data. This similarity search engine is used to similarity search the profile data against suspended-users profile data and provide a similarity search result set that includes indicia of similarity. The Office cites column 13, lines 1-4 of Brown as comparing the result to a weight and column 13, lines 21-26 of Brown as determining an accurate match and to determine how close is the match. There is no disclosure in these citations or anywhere in either the Chapman or Brown reference of determining a positive



or negative similarity match, or of comparing a similarity search result to a first match tolerance level. There is no disclosure of a similarity search function, as disclosed in Applicants' specification, in the Brown reference. Brown discloses using a Soundex function to convert elements of input search data to terms having a finite set of possible values, and using statistical analysis to weight records to calculate how close input data is to each match record. This disclosure in the Brown reference is not a similarity search function as disclosed in the present specification.

Considering Applicants' claims 6 and 21 (currently amended), claims 6 and 21 recite the limitation "wherein a positive similarity match comprises a similarity match, between the at least one new-user identity attribute and at least one denied-user identity attribute, that meets or exceeds the first match tolerance level" and claims 7 and 22 recite the limitation "wherein a negative similarity match comprises a similarity match, between the at least one new-user identity attribute and at least one denied-user identity attribute, that does not meet or exceed the first match tolerance level." The cited passage in Brown at column 13, lines 27-30 describes data that is somewhat "close" to input search data, and the cited passage in Brown at 13, lines 21-26 describes determining an accurate match and to determine how close is the match. There is no disclosure in these citations or anywhere in either the Chapman or Brown reference of determining a positive or negative similarity match, or of comparing a similarity search result to a first match tolerance level.

Considering Applicants' claim 8 (currently amended), claim 8 recites "where a positive similarity match has been determined, verifying the positive similarity match via a secondary review, after the step of determining whether a positive or negative similarity match exists and before the step of denying the new-user access to the computer system."

The cited passage in Brown at column 14, lines 8-14 describe a second function, comprising 22 record match tests, for determining if one or a few of the top ten weighted match records may be considered to be a match to the input search data. The cited passage in Brown at column 14, lines 17-21 describe a process to determine the statistical likelihood of a record corresponding to input search data. There is no disclosure in the Chapman or Brown reference of verifying a positive similarity match where a positive similarity match has been previously determined.

Considering Applicants' claims 9 and 23 (currently amended), claims 9 and 23 recite, "wherein the step of verifying the positive similarity match further comprises comparing the similarity search result to a second match tolerance level." The cited passage in Brown at column 14, lines 14-17 describe 22 tests for comparing record weights of certain match records based on statistical criteria. The cited passage in Brown at column 14, lines 17-21 describe a process to determine the statistical likelihood of a record corresponding to input search data. There is no disclosure in the Chapman or Brown reference of verifying a positive similarity match by comparing similarity search results to a second match tolerance level.

Considering Applicants' claims 10 and 11 (currently amended), claim 10 recites, "allowing the new-user to access the computer system, where the positive similarity match does not meet or exceed the second match tolerance level" and claim 11 recites "denying the new-user access to the computer system, where the positive similarity match meets or exceeds the second match tolerance level." The cited passage in Brown at column 14, lines 23-32 describe using only the top ten match records for 22 second function tests for producing test weights that have a zero value if a test fails and a value of  $K_n * W_n$  if the test

passes. The cited passage in Brown at column 14, lines 43-47 describe three types of match conditions, whereby a hit, miss or multiple value will be assigned to the corresponding match record. There is no disclosure in the Brown or Chapman reference of allowing user access where a positive similarity match does not meet or exceed a second match tolerance level, or denying a user access where a positive similarity match meets or exceeds a second match tolerance level.

The Office has also rejected claims 13 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Chapman et al. (U.S. Patent No. 5,774,650) in view of U.S. Patent No. 6,626,092 to Berke. Claim 13 is dependent upon independent claim 1 and claim 24 is dependent on independent claim 16. These dependent claims incorporate all the limitations of the independent claim upon which they depend while providing further unique and non-obvious recitations. Since it has been shown above that the rejection of claims 1 and 16 are not supported by the Chapman disclosure and are not anticipated, the rejections of these dependent claims 13 and 24 as obvious are also not supported by the Chapman reference and should be withdrawn.

Since the references of Chapman, Brown and Berke cited by the Office do not teach or suggest every element of Applicants' claimed invention, arranged as in the claims 5-11, 13 and 20-24 the Office has failed to substantiate a *prima facie* case for obviousness under 35 U.S.C. § 103(a). Therefore the rejection of claims 5-11, 13 and 20-24 are not supported by the cited references, and should be withdrawn. Applicants request withdrawal of the rejection of claims 13-24, reconsideration and reexamination of the application.

### Summary

The responses detailed above rebut the assertions by the Office of anticipation and obviousness of Applicants' invention, since all the elements of Applicants' claimed invention are not found in the cited references of Chapman et al, Brown et al and Berke. The responses substantiate the novelty and nonobviousness of claims 1-14, 16-25 and 27 of Applicants' specification over the cited references. Since the rejections are unsupported for failure to find all Applicants' claim limitations in the cited references, the rejections should be withdrawn.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Douglas D. Russell, Applicants' Attorney at 512-338-4601 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

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